

FRONIUS ECO

The compact project inverter for maximum yields



SnapINverter Technology



Integrated data communication



Dynamic Peak Manager



Smart Grid Ready



Zero feed-in



The three-phase Fronius Eco in power categories 25.0 and 27.0 kW perfectly meets all the requirements of large-scale installations. Thanks to its light weight and SnapINverter mounting system, this transformerless device can be installed quickly and easily either indoors or outdoors.

This inverter range is setting new standards with its IP 66 protection class. Furthermore, thanks to its integrated double fuse holders and optional overvoltage protection, string collection boxes are no longer necessary.

TECHNICAL DATA FRONIUS ECO

INPUT DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Number of MPP trackers		1
Max. input current ($I_{dc \max}$)	44.2 A	47.7 A
Max. array short circuit current ($I_{sc \text{ pv}}$)*		80 A
DC input voltage range ($U_{dc \min} - U_{dc \max}$)		580 - 1,000 V
Feed-in start voltage ($U_{dc \text{ start}}$)		650 V
Usable MPP voltage range		580** - 850 V
Number of DC connections		6
Max. PV generator output ($P_{dc \max}$)		37.8 kW _{peak}

* $I_{sc \text{ pv}} = I_{sc \max} \geq I_{sc}(\text{STC}) \times 1,25$ according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

** At 230 V actual mains voltage; design recommendation ($U_{mpp \min}$): 600 V

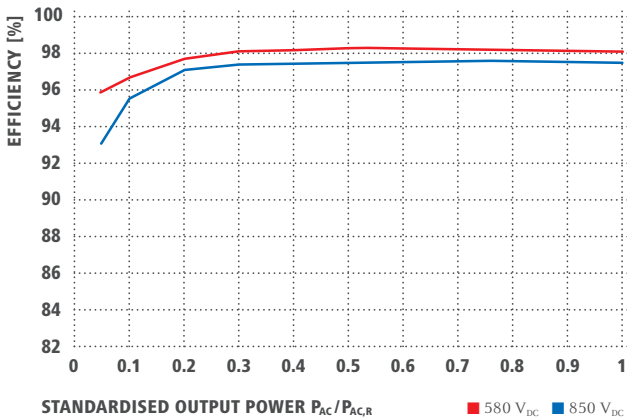
OUTPUT DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
AC nominal output ($P_{ac \text{ r}}$)	25,000 W	27,000 W
Max. output power / rated apparent power	25,000 VA	27,000 VA
AC output current ($I_{ac \text{ nom}}$)	37.9 A / 36.2 A	40.9 A / 39.1 A
Grid connection (voltage range)	3-NPE 380 V / 220 V or 3-NPE 400 V / 230 V (+20 % / - 30 %)	
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)	
Total harmonic distortion	< 3,0 %	
Power factor ($\cos \phi_{ac \text{ r}}$)	0 - 1 ind. / cap.	

GENERAL DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Dimensions (height x width x depth)	725 x 510 x 225 mm	
Weight	35.7 kg	
Degree of protection	IP 66	
Protection class	1	
Overvoltage category (DC / AC) ¹⁾	2 / 3	
Night-time consumption	< 1 W	
Inverter concept	Transformerless	
Cooling	Regulated air cooling	
Installation (DIN rail)	Indoor and outdoor installation (106 x 90 x 66 mm)	
Ambient temperature range	-25 - +60 °C	
Permitted humidity	0 to 100 %	
Max. altitude	2,000 m / 2,500 m unrestricted / restricted voltage range	
DC connection technology	6x DC+ and 6x DC- screw terminals 2.5 - 16 mm ²	
AC connection technology	5-pole AC screw terminals 2.5 - 16 mm ²	
Certificates and compliance with standards	ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G98, G99, UNE 206007-1, SI 4777, CEI 0-16, CEI 0-21	
Country of manufacture	Austria	

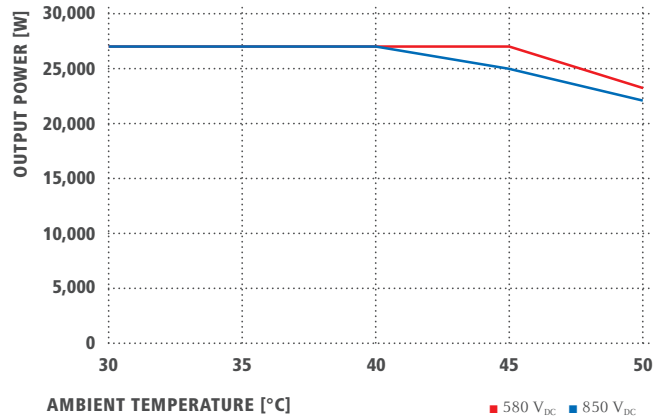
¹⁾ According to IEC 62109-1. DIN rail for optional type 1 + 2 or type 2 surge protection device available.

Further information regarding the availability of the inverters in your country can be found at www.fronius.com.

FRONIUS ECO 27.0.3-S EFFICIENCY CURVE



FRONIUS ECO 27.0.3-S TEMPERATURE DERATING



TECHNICAL DATA FRONIUS ECO

EFFICIENCY	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Max. efficiency	98.2 %	98.3 %
European efficiency (η _{EU})	98.0 %	98.0 %
MPP adaptation efficiency	> 99.9 %	

PROTECTION DEVICES	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
DC insulation measurement		Yes
Overload behavior		Operating point shift, power limitation
DC disconnecter		Yes
Integrated string fuse holders ¹⁾		Yes
Reverse polarity protection		Yes
RCMU		Yes

INTERFACES	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
WLAN / Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)
6 inputs and 4 digital inputs/outputs		Interface to ripple control receiver
USB (A socket) ²⁾		Datalogging, inverter update via USB flash drive
2x RS422 (RJ45 socket) ²⁾		Fronius Solar Net
Signalling output ²⁾		Energy management (floating relay output)
Datalogger and Webserver		Included
External input ²⁾		S0 meter connection / Evaluation of overvoltage protection
RS485		Modbus RTU SunSpec or meter connection

¹⁾ Optionally fitted with 6 fuses 15 A / 1,000 V on the plus side. ²⁾ Also available in the light version. Further information and technical data can be found at www.fronius.com.

/ Perfect Welding / Solar Energy / Perfect Charging

THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 5,660 employees worldwide and 1,321 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

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